

We claim:

- 5 1. A process for the production of a fungicide-tolerant plant by expressing an exogenous fungicide-binding polypeptide in the plant.
- 10 2. A process as claimed in claim 1, wherein the exogenous fungicide-binding polypeptide is a single-chain antibody fragment.
- 15 3. A process as claimed in claim 1, wherein the exogenous fungicide-binding polypeptide is a complete antibody or a fragment derived therefrom.
- 20 4. A process as claimed in claim 1, wherein the fungicide is methyl methoxyimino- α -(ω -tolyloxy)- ω -tolylacetate (BAS 490F).
- 25 5. A process as claimed in any of claims 1 - 3, wherein the plant is mono- or dicotyledonous.
- 30 6. A process as claimed in claim 5, wherein the plant is tobacco.
7. A process as claimed in any of claims 1 - 6, wherein the exogenous polypeptide is expressed constitutively in the plant.
- 35 8. A process as claimed in any of claims 1 - 6, wherein expression of the exogenous polypeptide in the plant is induced.
9. A process as claimed in any of claims 1 - 6, wherein the exogenous polypeptide is expressed in the leaves of the plant.
- 40 10. A process as claimed in any of claims 1 - 6, wherein the exogenous polypeptide is expressed in the seeds of the plant.
- 45 11. An expression cassette for plants, composed of a promoter, a signal peptide, a gene encoding expression of an exogenous fungicide-binding polypeptide, an ER retention signal and a terminator.

12. An expression cassette as claimed in claim 11, wherein the constitutive promoter used is the CaMV 35S promotor.

5 13. An expression cassette as claimed in claim 11, wherein the gene to be expressed is the gene of a single-chain antibody fragment.

10 14. An expression cassette as claimed in claim 11, wherein the gene or gene fragment of a fungicide-binding polypeptide in the form of a translation fusion with other functional proteins, for example enzymes, toxins, chromophores and binding proteins, is employed as the gene to be expressed.

15 15. An expression cassette as claimed in claim 11, wherein the polypeptide gene to be expressed is obtained from a hybridoma cell or with the aid of other recombinant methods, for example the antibody phage display method.

20 16. The use of the expression cassette as claimed in claim 11 for the transformation of dicotyledonous or monocotyledonous plants which constitutively express an exogenous fungicide-binding polypeptide seed- or leaf-specifically.

25 17. The use as claimed in claim 16, wherein the expression cassette is transferred into a bacterial strain and the resulting recombinant clones are used for the transformation of the dicotyledonous or monocotyledonous plants which constitutively express an exogenous fungicide-binding polypeptide seed- or leaf-specifically.

30 18. The use of the expression cassette as claimed in claim 11 as selection marker.

35 19. The use of a transformed plant as obtained in accordance with claim 17 or 18 for the production of a fungicide-binding polypeptide.

40 20. A process for the transformation of a plant by introducing a gene sequence which encodes a fungicide-binding polypeptide into a plant cell, into callus tissue, an entire plant and protoplasts of plant cells.

21. A process as claimed in claim 20, wherein transformation is effected with the aid of an agrobacterium, in particular of the species *Agrobacterium tumefaciens*.

5 22. A process as claimed in claim 20, wherein transformation is effected with the aid of electroporation.

10 23. A process as claimed in claim 20, wherein transformation is effected with the aid of the particle bombardment method.

15 24. The production of a fungicide-binding polypeptide by expressing a gene which encodes such a polypeptide in a plant or cells of a plant and subsequently isolating the polypeptide.

20 25. A plant comprising an expression cassette as claimed in claim 11, wherein the expression cassette imparts tolerance to a fungicide.

25 26. A plant as claimed in claim 25 which is tolerant to methyl methoxyimino- α -(*o*-tolyloxy)-*o*-tolylacetate (BAS 490F).

30 27. A method of controlling phytopathogenic fungi in transgenic fungicide-tolerant crop plants, which comprises the use of fungicides against which the crop plant forms fungicide-binding polypeptides or antibodies.

35 28. A fungicide-binding polypeptide or antibody with high binding affinity to methyl methoxyimino- α -(*o*-tolyloxy)-*o*-tolylacetate (BAS 490F) which is produced as claimed in claim 24.

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